

### **Remarks/Arguments**

Applicant thanks the Examiner for careful consideration of the application.

Applicant amends claim 39 to clarify to clarify the invention defined thereby. Applicant asserts no new matter has been introduced with this amendments. Support for the amendment of claim 39 can be found at least in claim 1.

No claims have been allowed by the Examiner.

#### **I. Allowable subject matter:**

Examiner has again objected to claim 28 as being dependent upon a rejected base claim; however, claim 28 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. While applicant agrees with Examiner's conclusions regarding patentability without necessarily agreeing with or acquiescing in the Examiner's reasoning. In particular, Applicant submits that the above identified claims are allowable because the prior art fails to teach, anticipate, or render obvious the invention as claimed independent of how the invention is paraphrased.

Applicant notes Examiner states that the objection to claim 28 is the only rejection repeated, however, Examiner has repeated the nonstatutory obviousness-type double patenting rejection without providing any claim analysis for a second time. In addition, Applicant notes Examiner has also maintained rejections based on Feinn for the second time again without providing any additional explanation or taking into consideration Applicant's previous remarks.

#### **II. Rejections under 35 U.S.C. §102**

Examiner, on page 2 of the Office Communication has rejected claims 39 and 41-42 under 35 U.S.C. §102(b) as being anticipated by Coulman (U.S. Patent No.

6,045,215, "Coulman"). This rejection is respectfully traversed with regards to claims 39 and 41-42.

Applicant traverses Examiner's rejection of claims 39 and 41-42 since Examiner has failed to establish a *prima facie* case of anticipation. A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *MPEP 2131*. All words in a claim must be considered in judging the patentability of that claim against the prior art. *Id.* (citing *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)). These requirements are not met here.

In regards to amended independent claim 39, claim 39 discloses a "fluid ejection device, comprising: a substrate having means for ejecting a fluid; a substrate carrier having means for supporting said substrate; and means for adhering said substrate to said means for supporting said substrate, wherein said means for adhering includes a one-part epoxy adhesive having an epoxy resin including a polyglycidyl ether of a polyhydric phenol, and a solid cylcoaliphatic amine curing agent."

Applicant respectfully traverses Examiner's statement, beginning at the bottom of page 2, "Coulman discloses a fluid ejection device 10 from Fig. 1), comprising . . . means for adhering said substrate to said means for supporting said substrate (column 24, line 32 through column 25, line 13 . . . ." First, Applicant notes Examiner has provided no reasoned explanation based on sound technical reasoning nor even identified any numeral shown in any of the figures of Coulman associated with "means for adhering said substrate to said means for supporting said substrate." In addition, Applicant asserts Applicant's amendment to claim 39 makes Examiner's rejection moot since Coulman does not disclose "wherein said means for adhering includes a one-part epoxy adhesive having an epoxy resin including a polyglycidyl ether of a polyhydric phenol, and a solid cylcoaliphatic amine curing agent," as claimed in amended independent claim 39. Accordingly, Applicant asserts the rejection of claims 39 and 41-42 has been overcome. Therefore, Applicant respectfully requests Examiner withdraw

the rejection of claims 39 and 41-42 under 35 U.S.C. §102(b) as being anticipated by Coulman at least for this reason alone.

### **III. Rejections under 35 U.S.C. §103:**

Examiner has rejected claims 1-3, 5-6, 8-13, 15-18, 26-27, 29-31, and 37 under 35 U.S.C. §103(a) as being unpatentable over Coulman (U.S. Patent No. 6,045,215, "Coulman") in view of Shokal (U.S. Patent No. 3,336,241, "Shokal"). This rejection is respectfully traversed with regards to claims 1-3, 5-6, 8-13, 15-18, 26-27, 29-31, and 37 since neither Coulman nor Shokal taken either individually, or in combination therewith, renders Applicant's claimed invention obvious under 35 U.S.C. §103(a).

To establish a *prima facie* case of obviousness of a claimed invention, all words in a claim must be considered in judging the patentability of that claim against the prior art. *Id.* (citing *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)). These requirements are not met here. In addition, the prior art elements/teachings must yield predictable results when combined in order to meet the standards to establish a *prima facie* case of obviousness of a claimed invention.

In regards to independent claim 1, claim 1 discloses a fluid ejection device, comprising: "a substrate carrier having a substrate-receiving-surface; a substrate having at least one fluid ejector actuator disposed on said substrate; and a one-part epoxy adhesive disposed between said substrate and said substrate-receiving-surface, wherein said one-part adhesive comprises: an epoxy resin having a polyglycidyl ether of a polyhydric phenol, and a solid cycloaliphatic amine curing agent."

Applicant asserts Examiner has failed to establish a *prima facie* case of obviousness in combining Shokal with Coulman. Applicant asserts Examiner has not included in the written record explicit findings as to how a person of ordinary skill would have understood the prior art teachings, or what a person of ordinary skill would have known or could have done. Applicant traverses Examiner's statement, on page 5, "it would have been obvious . . . to have provided a one part epoxy adhesive . . . as the epoxy adhesive in Coulman in order to provide improved adhesiveness and mechanical

strength as taught or suggested by Sbokal[Shokal]." Applicant asserts that Examiner's reasoning that one would have combined Shokal with Coulman for the purpose of providing improved adhesiveness and mechanical strength is based on pure speculation by Examiner. Applicant notes, as best as Applicant has been able to determine, Shokal does not use the term adhesiveness or the term adhesion. Applicant asserts Shokal only uses the term adhesive in the last line of the abstract where Shokal states "useful for preparing adhesives, laminates, castings and moldings," and in Col. 8, line 70 stating the compositions may be used "for metal, wood, concrete, plaster and the like, and as surface coatings for various types of surfaces." In addition, as best Applicant has been able to determine, Shokal is silent on the term mechanical strength. Thus, if Examiner continues to assert it is obvious to combine Shokal with Coulman, Applicant respectfully requests Examiner particularly point out where in Shokal any teaching or suggestion may be found of using the compounds of Shokal to provide a one part epoxy adhesive having improved adhesiveness and mechanical strength.

Applicant asserts instead Shokal does disclose that the invention of Shokal provides for "products having good resistance to chalking and discoloration caused by exposure to outdoor conditions." Col. 1, lines 70-72. Applicant is unaware of any rationale in regards to resistance to discoloring and chalking that one of ordinary skill in the art of making fluid ejection devices would associate with the need for an epoxy resin to adhere a substrate to a substrate carrier. Clearly, Applicant asserts that the mere statement to improve adhesiveness mechanical strength is simply a generic rationale made up by Examiner that would be associated with any and virtually every adhesive ever made. Applicant asserts one of ordinary skill in the art of adhesives would readily recognize not every adhesive will work in all situations. Thus, Applicant asserts Examiner's assertion does not warrant rising to the level sufficient to sustain an argument for obviousness in regards to the unpredictable chemical sciences involving adhesives. Further, Applicant notes clearly Shokal is not germane to the question at hand since the epoxy adhesives disclosed in Shokal can be cured to form products having outstanding resistance to discoloration and chalking by outdoor conditions. For fluid ejection devices Applicant is unaware of any general need to deal with outdoor conditions. Thus, other than using Applicant's invention as a template Applicant asserts

Examiner has provided no rational reason one of ordinary skill in the art of fluid ejection devices reading Shokal would be led to try the epoxy adhesive disclosed in Shokal other than to say that one of ordinary skill in the art of fluid ejection devices would try every adhesive ever created simply because it is an adhesive. Further, Applicant asserts Shokal in teaching adhesives for outdoor use actually teaches away from Applicant's claimed invention because the problems solved by Shokal are not related to any problems Applicant is solving with Applicant's invention. Accordingly, Applicant believes the rejection of claims 1-3, 5-6, 8-13, 15-18, 26-27, 29-31, and 37 has been overcome. Therefore, Applicant respectfully requests Examiner withdraw the rejection of claims 1-3, 5-6, 8-13, 15-18, 26-27, 29-31, and 37 under 35 U.S.C. §103(a) as being unpatentable over Coulman in view of Shokal at least for the second reason alone.

In addition, in regards to dependent claim 11, claim 11 discloses "fluid inlet channels formed in said substrate and fluidically coupled to said chamber." Examiner, on page 5 of the Office Action states that Coulman discloses "fluid inlet channels and coupled to the chamber (column 12, line 49 through column 13, line- 10). Applicant traverses Examiner statement. Applicant notes Coulman actually discloses "ink flow passageways are formed on both sides of the substrate 82 so that ink flowing from the ink outlet port 54 in the central cavity 50 can ultimately come in contact with the resistors 86 . . . ." Applicant asserts that ink flowing around the edge of the substrate does not disclose "fluid inlet channels formed in said substrate and fluidically coupled to said chamber," i.e. Coulman does not disclose forming fluid inlet channels in the substrate rather Coulman discloses flowing fluid around the edge of the substrate. Since Examiner has made the same rejection, based previously on Tom and currently on Coulman when both references cite essentially the same teaching of flowing fluid around the edge of the substrate; Applicant respectfully requests Examiner in the next response provide a more reasoned explanation, based on sound technical reasoning, how flowing fluid around an edge teaches Applicant's claimed invention in regards to dependent claim 11. By providing a more reasoned explanation Applicant asserts Examiner will be further clarifying the issues for appeal. Shokal clearly does not cure the deficiencies of Coulman. Accordingly, Applicant asserts the rejection of claim 11 has been overcome. Therefore, Applicant respectfully requests Examiner withdraw the

rejection of claim 11 under 35 U.S.C. §103(a) as being unpatentable over Coulman in view of Shokal at least for this reason alone.

Examiner has rejected claim 14 under 35 U.S.C. §103(a) as being unpatentable over Coulman (U.S. Patent No. 6,045,215, "Coulman") in view of Shokal (U.S. Patent No. 3,336,241, "Shokal") and further in view of Boyd (U.S. Patent No. 3,874,493, "Boyd"). This rejection is respectfully traversed with regard to claim 14 since neither Coulman, Shokal nor Boyd taken either individually, or in combination therewith, renders Applicant's claimed invention obvious under 35 U.S.C. §103(a).

Claim 14 discloses "wherein said substrate carrier further comprises a ceramic chip carrier." Applicant traverses Examiner's statement that Boyd discloses "a substrate carrier comprising a ceramic chip in a printer (column 13, lines 32-52) for the purpose of providing lower costs and/or employing the use of a dot matrix-type ejector." Applicant asserts Examiner has failed to establish a *prima facie* case of obviousness in combining Boyd with Shokal and Coulman. Applicant asserts Examiner has not included in the written record explicit findings as to how a person of ordinary skill would have understood the prior art teachings, or what a person of ordinary skill would have known or could have done. Applicant asserts Examiner's motivation of providing lower costs is without merit since clearly adding a ceramic chip even to Boyd increased the cost of the printer through an additional part and added assembly cost. Thus, Examiner's first motivation for combining the references does not make sense. In addition, Examiner also asserts another motivation is to employ the use of a dot matrix-type ejector. Applicant can only guess as to why Examiner would even make such a statement since without a more detailed explanation by Examiner Applicant can only guess as to what Examiner means by a "dot matrix-type ejector." As best Applicant knows dot matrix is an entirely different printing mechanism that does not have anything in common with the fluid ejection devices disclosed in Applicant's instant specification. Thus, if Examiner continues to assert it is obvious to combine Boyd with Shokal and Coulman, Applicant respectfully requests Examiner particularly point out where in Boyd any teaching or suggestion may be found of a ceramic chip carrier used in a fluid ejection device and to provide a more detailed explanation based on sound

technical reasoning as to why Examiner asserts lower cost and/or employing the use of a dot matrix-type ejector is motivation to combine the references. In particular, Applicant would like know what Examiner means by a "dot matrix-type ejector."

Applicant asserts, other than using Applicant's invention as a template, Examiner has provided no rational reason one of ordinary skill in the art of fluid ejection devices reading Boyd would be led to use the ceramic chip disclosed in Boyd since without more explanation by Examiner the ceramic Chip of Boyd is used in a manner distinct from that of Applicant's claimed invention. If Examiner is relying on personal knowledge then Applicant respectfully requests Examiner provide an affidavit under 37 C.F.R. §1.104(d)(2). Applicant asserts that Boyd is silent on "wherein said substrate carrier further comprises a ceramic chip carrier." Accordingly, Applicant asserts the rejection of claim 14 has been overcome. Therefore, Applicant respectfully requests Examiner withdraw the rejection of claim 14 under 35 U.S.C. §103(a) as being unpatentable over Coulman in view of Shokal and further in view of Boyd at least for this reason alone.

Examiner has rejected claims 32-33 and 38 under 35 U.S.C. §103(a) as being unpatentable over Coulman (U.S. Patent No. 6,045,215, "Coulman") in view of Shokal (U.S. Patent No. 3,336,241, "Shokal") and further in view of Goel (U.S. Patent No. 4,728,384, "Goel"). This rejection is respectfully traversed with regard to claim 14 since neither Coulman, Shokal nor Goel taken either individually, or in combination therewith, renders Applicant's claimed invention obvious under 35 U.S.C. §103(a).

Claim 32 discloses "wherein said one-part adhesive further comprises a thixotrope." Applicant asserts Examiner has failed to establish a *prima facie* case of obviousness in combining Goel with Shokal and Coulman. Applicant asserts Examiner has not included in the written record explicit findings as to how a person of ordinary skill would have understood the prior art teachings, or what a person of ordinary skill would have known or could have done. Applicant notes Goel is concerned with a two-part epoxy adhesive in contradistinction to Applicant's claimed invention which is to a one-part epoxy. Applicant notes Goel teaches the use of thixotropic agents such as

fumed silica may be added to the epoxy component of the two part adhesive. As best Applicant has been able to determine Goel does not disclose, teach, or suggest the use of a thixotrope in a one part epoxy adhesive. Thus, Applicant asserts Examiner's assertion does not establish a *prima facie* case of obviousness and is clearly not sufficient to sustain an argument for obviousness in regards to the unpredictable chemical sciences involving adhesives. Examiner has provided no evidence that a thixatropo added to an epoxy resin component of a two-part epoxy adhesive would convey to one of ordinary skill in the art of adhesives that such a thixatropo can be added to a one-part adhesive having an epoxy resin with a polyglycidyl ether of a polyhydric phenol, and a solid cycloaliphatic amine curing agent without undue experimentation.

Applicant asserts, Examiner again is using Applicant's invention as a template, Examiner has provided no rational reason one of ordinary skill in the art of fluid ejection devices would combine Goel with Shobal and Coulman. If Examiner is relying on personal knowledge then Applicant respectfully requests Examiner provide an affidavit under 37 C.F.R. §1.104(d)(2). Accordingly, Applicant asserts the rejection of claims 32-33 and 38 has been overcome. Therefore, Applicant respectfully requests Examiner withdraw the rejection of claims 32-33 and 38 under 35 U.S.C. §103(a) as being unpatentable over Coulman in view of Shokal and further in view of Goel at least for this reason alone.

Examiner has rejected claims 19-21 and 24-25 under 35 U.S.C. §103(a) as being unpatentable over Coulman (U.S. Patent No. 6,045,215, "Coulman") in view of Shokal (U.S. Patent No. 3,336,241, "Shokal") and further in view of Feinn (U.S. Patent No. 6,325,491, "Feinn"). This rejection is respectfully traversed with regard to claim 21 since neither Coulman, Shokal, nor Feinn taken either individually, or in combination therewith, renders Applicant's claimed invention obvious under 35 U.S.C. §103(a).

In regards to claim 21, claim 21 discloses a fluid ejection device "further comprising an electronic device electrically disposed on or within the fluid ejection device, wherein said one-part epoxy adhesive forms a glob top structure substantially encapsulating said electronic device." Applicant traverses Examiner's statement that



Feinn discloses the limitations of claim 21. Examiner on page 8 of the Office Action states "Feinn discloses . . . wherein the adhesive forms a glob top substantially encapsulating the electronic device . . . ." Applicant has been unable to find anywhere within Feinn a disclosure of the limitations claimed in Applicant's claim 21. Applicant notes as above in regards to claim 11 this is the second time Examiner has made this rejection in regards to Feinn. Applicant previously traversed and requested further clarification as to Examiner's reasoning. Applicant again respectfully requests Examiner particularly point out where in Feinn such a disclosure is made. If Examiner is relying on personal knowledge then Applicant respectfully requests Examiner provide an affidavit under 37 C.F.R. §1.104(d)(2). Applicant asserts that Examiner may have misinterpreted claim 21 as claim 21 further comprises an electronic device that is encapsulated. In addition, Applicant believes Feinn does not disclose a glob top that substantially encapsulates an electronic device and Examiner has provided no reference numeral, no citation of where in Feinn such a disclosure is made, and no figure where such a structure is shown. Accordingly, Applicant asserts the rejection of claim 21 has been overcome. Therefore, Applicant respectfully requests Examiner withdraw the rejection of claim 21 under 35 U.S.C. §103(a) as being unpatentable over Coulman in view of Shokal and further in view of Feinn at least for this reason alone.

#### **IV. Double Patenting:**

Examiner has rejected claims 1-42 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over the claims of U.S. Patent No.7,063,413 in view of Takago (U.S. Patent No. 4,291,114. This rejection is respectfully traversed with regards to claims 1-42.

Applicant traverses Examiners rejection of claims 1-42 since Examiner has failed to establish a *prima facie* case of nonstatutory obviousness type double patenting. Applicant asserts Examiner has misconstrued nonstatutory obvious type double patenting by combining Takago with US7063413 without any claim analysis identifying the inventions claimed in Applicant's claims under consideration and the claims of U.S. Patent No.7,063,413. Applicant asserts the proper analysis requires establishment that

any variation between Applicant's claimed invention and the earlier issued claimed invention would have been obvious to a person of ordinary skill in the art.

To establish a *prima facie* case of nonstatutory-type double patenting, the Examiner must identify the inventions claimed in the claims under consideration and in the patent claims. In addition, the Examiner must establish that any variations between the inventions claimed in the claims under consideration and the earlier-issued patent claims would have been obvious to a person of ordinary skill in the art. Further the Examiner's showing of obviousness must follow the analysis used to establish a *prima facie* case of obviousness. Applicant asserts the comparison should be between the inventions defined by the claims, not the language of the claims. Thus, the analysis is based on what the claim defines and not on claim language itself. That is the emphasis is centered on whether it would have been obvious to modify the invention claimed, not whether it would have been obvious to modify the claimed invention. The analysis should not focus on what the claim language discloses, but rather on what it defines. Since Examiner has provided no analysis of Applicant's claims describing the invention claimed by Applicant and an analysis of the claims of the earlier issued claimed invention, Applicant asserts Examiner has failed to establish a *prima facie* case of nonstatutory-type double patenting.

Instead Applicant argues Examiner has simply and improperly combined a prior reference as if Examiner is treating the double patenting rejection as an obviousness §103 type rejection instead of focusing on the analysis between US7063413 and the instant case. Applicant asserts only after making the analysis of the two sets of claims should Examiner's analysis then include a showing of obviousness following the analysis used to establish a *prima facie* case of obvious. Applicant again notes this is the second time Examiner has made this rejection and the second time Applicant has noted that the Examiner has failed to provide the proper analysis for a nonstatutory obviousness-type double patent rejection. Applicant again respectfully requests Examiner provide a proper analysis so that Applicant may respond without having to guess as to Examiner's reasoning. Accordingly, Applicant asserts the rejection of claims 1-42 has been overcome. Therefore, Applicant respectfully requests Examiner

withdraw the rejection of claims 1-42 based on the judicially created doctrine of nonstatutory obviousness-type double patenting.

Therefore, in view of the foregoing Amendment and Remarks, Applicant believes the present application to be in a condition suitable for allowance. Examiner is respectfully urged to withdraw the rejections, reconsider the present Application in light of the foregoing Amendment, and pass the amended Application to allowance.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would help to clarify any issues remaining in the application to more quickly advance prosecution of the present application.

Favorable action by the Examiner is solicited.

Hewlett-Packard Company  
1000 NE Circle Blvd. m/s 422B  
Corvallis, OR 97330  
(541) 715-1694

Respectfully submitted,  
Lawrence Gibson et al.

By: /Donald J. Coulman/  
Donald J. Coulman  
Reg. No. 50,406  
Attorney for Applicant

Date: 14 April 2008